To: vanDrunick, Suzanne[vanDrunick.Suzanne@epa.gov]; Sayles, Gregory[Sayles.Gregory@epa.gov]; Bahadori, Tina[Bahadori.Tina@epa.gov]; Kadeli, Lek[Kadeli.Lek@epa.gov]
From: Kavlock, Robert
Sent: Sun 1/12/2014 5:24:18 AM
Subject: Fw: EDF blog post: Failed TSCA collides with the real world in West Virginia chemical spill this week
MCHM.xps

Just and FYI.

From: Richard, Ann
Sent: Saturday, January 11, 2014 10:26:44 PM
To: Crofton, Kevin; Thomas, Russell; Judson, Richard; Martin, Matt
Cc: Linnenbrink, Monica; Kavlock, Robert
Subject: FW: EDF blog post: Failed TSCA collides with the real world in West Virginia chemical spill this week

All:

Below is the latest EDF posting below referring to the massive chemical contamination of public water supplies in WV, in case you haven't seen it already. Although I confirmed that there isn't any data out there easily found, I did find the chemical in question, MCHM [CAS 34885-03-5] on the TOX21S inventory, from EPA's Tox21 library. I'm attaching a printout of the DSSTox structure browser similarity results, which brings up the cmpd in question and 3 pretty similar analogues, all 4 in TOX21S (the second cmpd is from NTP, the next 2 are also in EPA's library).

I checked the structure in PubChem and there are results provided for 56 assays, most inactive and a handful inconclusive. I'm pretty sure these are Tox21 assays by the look of the descriptions. The link the results summary page is below:

http://pubchem.ncbi.nlm.nih.gov/summary/summary.cgi?sid=162306080&viewopt=PubChem#x299

I haven't checked the PubChem results for the 3 analogs yet. Do we have any other Tox21 data on hand not yet in PubChem?

I've checked our chemical inventory database and this cmpd (as well as the other 2 Tox21 EPAP analog cmpds) is only in EPA's Tox21 test inventory, not in ToxCast. It appears to be soluble at 20mM and we have plenty of solution and neat sample on hand.

Should we try to move this into ToxCast Ph3?

Let me know,
Ann

From: Richard Denison [rdenison@edf.org]
Sent: Saturday, January 11, 2014 4:30 PM
To: rdenison@edf.org
Subject: EDF blog post: Failed TSCA collides with the real world in West Virginia chemical spill this week

www.blogs.edf.org/health<http://www.blogs.edf.org/health>

Failed TSCA collides with the real world in West Virginia chemical spill this

week<http://blogs.edf.org/health/2014/01/11/failed-tsca-collides-with-the-real-world-in-west-virginia-chemical-spill-this-week/>
By Richard Denison<http://blogs.edf.org/health/author/rdenison/> | Bio<http://www.environmentaldefense.org/page.cfm?tagID=908> | Published: January 11, 2014

Richard Denison, Ph.D.<http://environmentaldefense.org/page.cfm?tagID=908>, is a Senior Scientist. Jennifer McPartland, Ph.D.<http://environmentaldefense.org/page.cfm?tagID=62101>, is a Health Scientist.

If the protracted debate over reform of the Toxic Substances Control Act (TSCA) sometimes seems esoteric or abstract, the epic failure of this law could not be better illustrated than by what's unfolding in Charleston, WV this week.

There, a major spill into the Elk River of an obscure chemical used to wash coal<http://online.wsj.com/news/articles/SB10001424052702304347904579312401864798652> has disrupted the lives of hundreds of thousands of residents of the state for what is likely to be days if not weeks or longer. The storage tank from which the chemical has leaked lies upstream from the intake for one of the city's drinking water treatment plants. Even before the leak had been detected or reported, the chemical was sucked into the plant and distributed through thousands of miles of pipe to homes and businesses. Residents have been told not to drink, bathe or otherwise come into contact with the water – although some exposure clearly did occur before the warnings were issued. Massive amounts of water are being trucked into the area. President Obama declared the situation a national emergency.<https://www.fema.gov/news-release/2014/01/10/president-obama-signs-west-virginia-emergency-declaration>

What is particularly maddening and outrageous is that no one – not local or state officials, not the company that owns the storage tank, not the federal government – can say anything even close to definitive about what risk the chemical poses to people, even in the short-term, let alone over time. And that's where the failures of TSCA come into sharp focus.

The chemical in question is 4-methylcyclohexane methanol, or MCHM<http://en.wikipedia.org/wiki/4-methylcyclohexanemethanol>; its unique identifying "CAS number" is 34885-03-5. Environmental Protection Agency (EPA) data indicate it's made by one company in the U.S.: Eastman Chemical Company (search here<http://java.epa.gov/oppt_chemical_search/> using the CAS number). The amount of the chemical produced and used in the U.S., however, is not publicly reported because Eastman declared that information to be confidential.

A Material Safety Data Sheet (MSDS)<https://www.spectrumchemical.com/MSDS/TCI-M1412.pdf> that summarizes available information on the chemical is available. Have a look at what is says about the hazards of the chemical:

[MCHM MSDS excerpt]<http://blogs.edf.org/health/files/2014/01/MCHM-MSDS-excerpt.jpg>

An older MSDS from Eastman<http://mediad.publicbroadcasting.net/p/wvpn/files/201401/MSDS-MCHM_I140109214955.pdf> for "crude MCHM" (which includes several other compounds) also contains no health data, although it provides similar warnings.

We've searched major databases for information on the hazards of this chemical. None is available. Let me repeat: No health data are available on this chemical.

Specifically, we searched the following government sources for any hazard data on MCHM (using the CAS number), and came up empty:

- OSHA's Occupational Chemicals DataBase<https://www.osha.gov/chemicaldata/>: NO HAZARD DATA
- EPA CDAT<http://java.epa.gov/oppt_chemical_search/> and Chemview Portal<http://java.epa.gov/chemview>: NO HAZARD DATA

· EPA ACToR database<http://actor.epa.gov/actor/GenericChemical?casrn=34885-03-5>: NO HAZARD DATA
· EU Classification and Labeling Inventory<http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>: NO HAZARD DATA
· ATSDR Toxic Substances Portal<http://www.atsdr.cdc.gov/substances/toxsearch.asp>: NO HAZARD DATA
· NIOSH Pocket Guide<http://www.cdc.gov/niosh/npg/search.html>: NO HAZARD DATA

How, you might well ask, is this possible? How can a chemical in active production and use – and now being released into the environment and exposing people – be on the market without any hazard data or evidence of its safety?

The sad truth is this chemical is one of tens of thousands of chemicals on the market today with little or no safety data. MCHM is one of the 62,000 chemicals that were already in use when TSCA, our nation's main chemical safety law, was passed in 1976. All of these chemicals were grandfathered by TSCA: That means they were simply presumed to be safe, and EPA was given no mandate to determine whether they are actually safe. Even to require testing of these chemicals under TSCA, EPA must first provide evidence that the chemical may pose a risk – a toxic Catch-22.

This tragic incident is already imposing enormous burdens of uncertainty, anxiety, and economic costs on the hundreds of thousands of Americans directly affected. Whether and to what extent it will also take a toll directly on their health remains to be seen.

While accidents happen, of course, the tragedy is compounded by the fact that much of the impact of this spill could have been avoided had basic safety information on this chemical been available. Long-overdue reform of TSCA – which is finally on Congress' agenda<http://www.edf.org/health/policy/chemicals-policy-reform> – could go a long way to addressing that part of the problem.

How many more such incidents must happen before Congress acts?

********** ATTACHMENT NOT DELIVERED **********

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(866) 411-4EPA (4372). The TDD number is (866) 489-4900.

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